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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

COONEY, JOHN M

ART UNIT	PAPER NUMBER
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1765

NOTIFICATION DATE	DELIVERY MODE
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02/02/2011

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/772,903	Applicant(s) JOERN ET AL.	
	Examiner John Cooney	Art Unit 1765	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 November 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,9,11,18,19,22-24,26,28,30,31 and 35-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,9,11,18,19,22-24,26,28,30,31 and 35-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11-18-10 has been entered.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 31 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 31 is confusing as to intent because the term "also" implies that water is not already allowed for by claim 30.

Also, it appears that the second use of "is" should be deleted and replaced with the term "in".

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 9, 11, 18, 19, 22-24, 26, 28, 30, 31 and 35-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sieker et al.(6,403,665) in view of Bodnar et al.(5,143,945).

Sieker et al. discloses preparations of rigid polyurethane or urethane-modified polyisocyanurate foams prepared by reacting isocyanates and isocyanate reactive materials, including polyester polyols in elevated amounts as claimed, at isocyanate indexes inclusive of those claimed, in the presence of blowing agents reading on those claimed, urethane catalysts, and functionalized carboxylic acids as claimed (see column 1 line 3 – column 7 line 63 and the examples, as well as, the entire document). The pKa in water values are values associated with the selection of the functionalized carboxylic acid and are not seen to be associated with difference in the claims in the patentable sense.

Sieker et al. differs from applicants' claims in that alkali metal salt trimerization catalysts as claimed are not particularly required and amounts of inclusion when chosen are not specified (see again column 5 lines 52-63). However, Bodnar et al. (see column 8 line 32 - column 9 line 36) discloses employment of these catalysts, including a preference for potassium 2-ethylhexanoate (column 9 lines 8-9), in polyurethane-polyisocyanurate foam systems for the purpose of ensuring the trimerization of excess isocyanate groups to isocyanurate linkages. Accordingly, it would have been obvious for one having ordinary skill in the art to have employed the trimerization catalysts of Bodnar et al. in the preparations of Sieker et al. in amounts as provided for by Bodnar et

al. for the purpose of ensuring the trimerization of excess isocyanate groups to isocyanurate linkages during product formation in order to arrive at the products and processes of applicants' claims with the expectation of success in the absence of a showing of new or unexpected results.

As to differences in the overlaps of amounts of the involved materials of the instant concern, it has long been held that where the general conditions of the claims are disclosed in the prior art, discovering the optimal or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233; *In re Reese* 129 USPQ 402 . Further, a prima facie case of obviousness has been held to exist where the proportions of a reference are close enough to those of the claims to lead to an expectation of similar properties. *Titanium Metals v Banner* 227 USPQ 773. **(see also MPEP 2144.05 I)** Similarly, it has been held that discovering the optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272,205 USPQ 215 (CCPA 1980).

When looking to showings of results in order to overcome a rejection, the following must be considered:

Results Must be Unexpected:

Unexpected properties must be more significant than expected properties to rebut a prima facie case of obviousness. *In re Nolan* 193 USPQ 641 CCPA 1977.

Obviousness does not require absolute predictability. *In re Miegel* 159 USPQ 716.

Since unexpected results are by definition unpredictable, evidence presented in comparative showings must be clear and convincing. *In re Lohr* 137 USPQ 548.

In determining patentability, the weight of the actual evidence of unobviousness presented must be balanced against the weight of obviousness of

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record. *In re Chupp*, 2 USPQ 2d 1437; *In re Murch* 175 USPQ 89; *In re Beattie*, 24 USPQ 2d 1040.

Claims Must be Commensurate With Showings:

Evidence of superiority must pertain to the full extent of the subject matter being claimed. *In re Ackerman*, 170 USPQ 340; *In re Chupp*, 2 USPQ 2d 1437; *In re Murch* 175 USPQ 89; *Ex Parte A*, 17 USPQ 2d 1719; accordingly, it has been held that to overcome a reasonable case of prima facie obviousness a given claim must be commensurate in scope with any showing of unexpected results. *In re Greenfield*, 197 USPQ 227. Further, a limited showing of criticality is insufficient to support a broadly claimed range. *In re Lemin*, 161 USPQ 288. See also *In re Kulling*, 14 USPQ 2d 1056.

Result Must Compare to Closest Prior Art:

Where a definite comparative standard may be used, the comparison must relate to the prior art embodiment relied upon and not other prior art – *Blanchard v. Ooms*, 68 USPQ 314 – and must be with a disclosure identical (not similar) with that of said embodiment: *In re Tatincloux*, 108 USPQ 125.

Applicants' have not persuasively demonstrated unexpected results for the combinations of their claims. Comparisons have not been made with the prior art embodiment relied upon. Applicants have not demonstrated their results to be unexpected and more than mere optimizations of the knowledge in the art or more significant than being secondary in nature. Applicants' have not demonstrated their showing to be commensurate in scope with the scope of combinations now claimed.

Applicant's arguments have been considered. However, rejection is maintained.

It is maintained that applicants have not demonstrated difference in a patentable sense over the preponderance of evidence, including beneficial flame and fire properties, provided for by the combined teachings of the above cited prior art.

According to MPEP 706.02(k) [R-6], Re: a Provisional Rejection (Obviousness) Under 35 U.S.C. *103 >Using Provisional Prior Art Under 35 U.S.C. 102(e)<, effective November 29, 1999, subject matter which was prior art under former 35 U.S.C. 103 via 35 U.S.C. 102(e) was disqualified as prior art against the claimed invention if that subject matter and the claimed invention “were, at the time the invention

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was made, owned by the same person or subject to an obligation of assignment to the same person.” This amendment to 35 U.S.C. 103(c) was made pursuant to section 4807 of the American Inventors Protection Act of 1999 (AIPA); see Pub. L. 106-113, 113 Stat. 1501, 1501A-591 (1999).

Applicants’ statements that they may show that subject matter of the prior and the claimed invention “were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.” Does not constitute a statement or showing that the subject matter of the prior art and the claimed invention “were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.”

Submitting papers indicating that the two inventions were at indicated points in time assigned to the same entity does not fulfill the need to state/show on the record that the subject matter of the prior art and the claimed invention “were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.”

Applicants need to make stated on the evidence of record that the subject matter of the prior art of instant concern and the claimed invention “were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.” in accordance with the requirements of MPEP 706.02(k).

Applicants are invited to call examiner if further assistance in addressing this rejection are needed.

Claims 1-4, 9, 11, 18, 19, 22-24, 26, 28, 30, 31, 35 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bodnar et al.(5,143,945).

Bodnar et al. discloses preparations of polyisocyanurate based foams prepared by reacting isocyanates and isocyanate reactive materials, including polyester polyols in elevated amounts as claimed, at isocyanate indexes as claimed in the presence of blowing agents reading on those claimed, alkali metal salt trimerization catalysts in amounts as claimed, and functionalized and non-functionalized carboxylic acids, wherein the disclosed preparations read on the methods and products of applicants' claims (see examples, as well as, the entire document).

The pKa in water values are values associated with the selection of carboxylic acid and are held to be intrinsic features of the teachings of Bodnar et al.

Bodnar et al. differs from applicants' claims as to the specific amounts and selection of catalysts for the function of trimerization and urethanization. However, Bodnar et al. discloses selection of catalysts in overlap with those of applicants' claims and disclosure for the purpose of imparting their catalyzing effect, including the role of trimerization and urethanization catalysis and the dual role of both (see column 8 line 32-column 9 line 45). Accordingly, it would have been obvious for one having ordinary skill in the art to have employed catalysts within the teachings of Bodnar et al. for the purpose of controlling trimerization and urethanization effects during product formation

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in order to arrive at the products and processes of applicants' claims with the expectation of success in the absence of a showing of new or unexpected results.

Further, though selection of amounts are not exact between Bodnar et al. and applicants' claims, it has long been held that where the general conditions of the claims are disclosed in the prior art, discovering the optimal or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233; *In re Reese* 129 USPQ 402 . Further, a prima facie case of obviousness has been held to exist where the proportions of a reference are close enough to those of the claims to lead to an expectation of similar properties. *Titanium Metals v Banner* 227 USPQ 773. **(see also MPEP 2144.05 I)**

Similarly, it has been held that discovering the optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272,205 USPQ 215 (CCPA 1980).

Bodnar et al. differs from claim 31 in that water is not particularly required. However, Bodnar et al. is clear as to employment of water being a preferred embodiment of their invention for the purposes of imparting the foaming effect. Accordingly, it would have been obvious for one having ordinary skill in the art to have employed water as the blowing agent of Bodnar et al. for the purpose of imparting the foaming effect in order to arrive at the products and processes of applicants' claims with the expectation of success in the absence of a showing of new or unexpected results.

Claims 37-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bodnar et al. as applied to claims 1-4, 9, 11, 18, 19, 22-24, 26, 28, 30, 31, 35 and 36 above, and further in view of Scherbel et al.(5,688,835).

Applicants' new claims 37-42 differ from Bodnar et al. in that hydrocarbons are not particularly employed. However, Scherbel et al. discloses hydrocarbons to be replacement blowing agents for halofluorocarbons in rigid foam applications (see column 1 lines 40-65). Accordingly, it would have been obvious for one having ordinary skill in the art to have replaced the halocarbons of Bodnar et al. with the hydrocarbons of Scherbel et al. for the purpose of imparting the foaming effect with environmentally advantageous results in order to arrive at the products and processes of applicants' claims with the expectation of success in the absence of a showing of new or unexpected results. In addition to Scherbel et al.'s disclosure of specific selections of hydrocarbons falling within the group of compounds identified by applicants' claims, it is held that the selection of C4-C8 hydrocarbons are of the most readily envisioned selections of hydrocarbons from Scherbel et al.'s generic disclosure, and distinction based on this further aspect of applicants' claims.

The following previous arguments are maintained to be still applicable to the above rejections over Bodnar et al., alone, or in view of Scherbel et al.:

Applicant's latest arguments have been considered. However, rejection is maintained.

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As to applicants' arguments directed towards the deficiencies of the combined teaching, it is held that the claims as the currently stand would be properly arrived at from the teachings and fair suggestions of the cited prior art. One more concerned with environmental concerns rather than price, insulation, and compatibility would look to the substitution of alkanes of Scherbel et al. for the haloalkanes of Bodnar et al. with the expectation of success in the absence of a showing of new or unexpected results attributed to differences in applicants' claims that are commensurate in scope with the claims as they currently stand. At this time, no sufficient showing of new or unexpected results has been made.

No new arguments have been made on reply. Accordingly, no further comment is seen necessary at this time.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Cooney whose telephone number is 571-272-1070. The examiner can normally be reached on M-F from 9 to 6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck, can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/John Cooney/

Primary Examiner, Art Unit 1796